NCA
VOC FOR IOP/FN
BACKGROUNDER NO. 5-5683 APRIL 3, 1978
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MICROWAVE LANDING SYSTEM MEETING

ANNCR :

A MEETING OF THE INTERNATIONAL CIVIL AVIATION ORGANIZATION (I.C.A.O.) OPENED MONDAY (APRIL 3) IN MONTREAL, CANADA TO ADOPT AN INTERNATIONAL STANDARD FOR SO-CALLED MICROWAVE LANDING SYSTEMS. THE MICROWAVE SYSTEMS ARE A HIGHLY SOPHISTICATED AND TOTALLY NEW WAY TO GUIDE AIRPLANES TO A SAFE LANDING. GARY EDQUIST HAS DETAILS IN THIS BACKGROUND REPORT.

VOICE:

FROM THE VERY FIRST DAYS OF AVIATION PILOTS HAVE BEEN AT THE MERCY OF THE WEATHER. IN THE EARLIER YEARS, IF FOG OR RAIN OBSCURED VISABILITY AT AN AIRPORT, A PILOT HAD NO CHOICE BUT TO FIND ANOTHER PLACE WHERE HE COULD SEE TO LAND. BUT ALL THAT CHANGED IN 1929 WITH THE SUCCESSFUL TESTING OF THE INSTRUMENT LANDING SYSTEM, OR I.L.S. USING SPECIAL RADIO TRANSMITTERS ON THE GROUND, A PILOT COULD RECEIVE SIGNALS FOR PRECISE GUIDANCE TO THE AIRPORT RUNWAY DURING THE LAST FEW KILOMETERS OF THE FLIGHT.

INSTRUMENT LANDING SYSTEMS HAVE BEEN THE WORLD STANDARD SINCE 1949, AND TODAY THERE ARE MORE THAN SIXTEEN-HUNDRED AIRPORTS WORLDWIDE EQUIPED WITH I.L.S. BUT DESPITE ITS WIDE ACCEPTANCE, I.L.S. HAS SEVERAL LIMITATIONS. THE INCREASING VOLUME OF AIR TRAFFIC TO THE WORLD'S MAJOR METROPOLITAIN AREAS HAS SEVERLY TAXED THE INSTRUMENT LANDING SYSTEM. AND THE NEW TYPES OF AIRCRAFT NOW BEING DEVELOPED WILL PUT DEMANDS ON I.L.S. THAT IT SIMPLY CANNOT MEET.

THE INTERNATIONAL CIVIL AVIATION ORGANIZATION, THE I.C.A.O., A UNITED NATIONS GROUP WHICH RECOMMENDS WORLDWIDE STANDARDS

FOR CIVIL AVIATION, URGED IN 1972 THAT A NEW, MORE ADVANCED, ALL-WEATHER GUIDANCE SYSTEM BE DEVELOPED. ALREADY, THE UNITED STATES, AUSTRALIA, GREAT BRITAIN AND OTHERS WERE AT WORK ON NEW LANDING SYSTEMS. ALL THE EXPERIMENTAL METHODS USE MICROWAVES -- EXTREMELY HIGH-FREQUENCY RADIO WAVES WHICH ARE ALMOST COMPLETELY UNAFFECTED BY NOISE OR INTERFERENCE. WORKING INDEPENDENTLY, THE UNITED STATES AND AUSTRALIA DEVISED SIMILAR METHODS WHICH CAME TO BE CALLED THE TIME REFERENCE SCANNING BEAM, OR T.R.S.B. FOR SHORT, WHILE THE BRITISH DEVELOPED THEIR DOPPLER SYSTEM. BOTH THE BRITISH AND AMERICAN-AUSTRALIAN SYSTEMS WILL LAND PLANES IN ANY WEATHER, BE ABLE TO CONTROL A GREATER NUMBER OF PLANES, AND BE FAR MORE PRECISE THAN THE OLDER I.L.S. SYSTEM.

FOR THE LONG-SUFFERING PEOPLE LIVING BELOW RUNWAY LANDING APPROACHES, THERE IS A HUGE BENEFIT TO BE GAINED FROM THE MICROWAVE SYSTEMS: LESS NOISE. THE NEW SYSTEMS ARE SO ACCURATE THAT PLANES WILL BE ABLE TO REMAIN AT A HIGHER ALTITUDE LONGER BEFORE LANDING AND WILL BE ABLE TO MANEUVER AROUND HEAVILY POPULATED AREAS AS THEY TAKEOFF OR LAND.

THERE ARE, ACCORDING TO OFFICIALS OF THE U.S. FEDERAL AVIATION AGENCY, SMALL BUT SIGNIFICANT DIFFERENCES IN THE MICROWAVE LANDING SYSTEMS. U.S. OFFICIALS SAY THE AMERICAN-AUSTRALIAN SYSTEM IS MORE RELIABLE THAN THE BRITISH VERSION. FURTHERMORE, THEY SAY, THE U.S. MICROWAVE SYSTEM WILL COST LESS TO BUY, WILL BE EASIER TO MAINTAIN, AND BE MORE VERSATILE IN THE YEARS AHEAD. THE UNITED STATES HAS BEEN TESTING ITS T.R.S.B. LANDING SYSTEM FOR THE PAST FIFTEEN YEARS, AND A GROUP OF TECHNICAL EXPERTS OF THE INTERNATIONAL CIVIL AVIATION ORGANIZATION HAS RECOMMENDED THAT THE U.S.-AUSTRALIAN SYSTEM BE APPROVED AS THE NEW INTERNATIONAL STANDARD.

AT THE MONTREAL MEETING OF THE I.C.A.O., THE MEMBERS WILL CONSIDER THE MERITS OF THE COMPETING SYSTEMS. WHATEVER DECISION THEY REACH WILL BE A RECOMMENDATION ONLY, WITHOUT ANY LEGAL FORCE. BUT TRADITIONALLY WORLD AVIATION HAS BENEFITED FROM STANDARDIZATION, SO AIRCRAFT OF ANY NATION CAN USE THE STANDARDIZED LANDING SYSTEM OF ANOTHER. THUS THE DECISION THAT COMES FROM THE MONTREAL MEETING WILL HAVE WORLDWIDE SIGNIFICANCE AND LIKELY DETERMINE WHICH MICROWAVE LANDING SYSTEM THE WORLD'S AIRPORTS WILL BE USING BY THE END OF THE CENTURY.

JS/RCS